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ABSTRACT

The shifting structure of production agriculture in Louisiana, characterized by technological change and economic growth, has created problems for farmers, forcing them either to get large, get out of farming, or get off-farm work to survive. A survey of 142 farmers living in parishes surrounding the Baton Rouge metropolitan area indicates off-farm employment has been a principal source of income for Louisiana farm families. Approximately 68% of total family income received was for off-farm income, of which 42% was earned by farm operators and 26% was earned by spouses. Average off-farm income earned by whites was $15,138 compared to $14,133 earned by blacks. Farm operators earned significantly more per hour than spouses mainly due to a gap in skill level and mobility. Most farm families were employed in relatively low-skilled and low-paying off-farm jobs commensurate with their skills and experience. With Louisiana now posting the highest unemployment rates in the country, opportunities for future off-farm employment are reduced. There is a need for a rural development program that would integrate both farm and non-farm programs and include a broad range of public service programs, from off-farm job creation and human resource development to welfare, social security, and community development programs. (NEC)

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OFF-FARM EMPLOYMENT AS A SOURCE OF FAMILY INCOME IN LOUISIANA

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ABSTRACT

Off-farm employment has been a principal source of income for Louisiana farm families. It was estimated that approximately 68 percent of the total family income received was for off-farm income, of which 42 percent was earned by farm operators and 26 percent was earned by spouses. Average off-farm income earned by whites was $15,138 compared to $14,133 earned by blacks. Farm operators earned significantly more per hour than spouses mainly due to a gap in skill level and mobility. Most of the farm families were employed in relatively low skilled and low-paying off-farm jobs commensurate with their skills and experience.

Keywords: off-farm employment, family income, small farms.

OFF-FARM EMPLOYMENT AS A SOURCE OF FAMILY INCOME IN LOUISIANA

INTRODUCTION

Agriculture in Louisiana, like any other state in the country, is a highly diversified industry in continual change. The general trend in Louisiana production agriculture is toward fewer but larger farms, a long term trend shared by all states. The trend toward greater concentration in the agricultural industry has been of considerable interest to agricultural researchers and public policy makers. Much of the interest is centered around (1) the alarming rate at which the number of small to medium size farms has been declining over the years, (2) the disproportionate percentage of total agricultural production now generated by a relatively small percentage of farms in the large size category, and (3) the rising percentage of farm family income derived from off-farm sources. The problem of declining numbers of farms and increasing average farm size has important implications for the well-being of farm families, the viability of rural communities and the effectiveness and desirable nature of public policy. This trend will also cause a great deal of instability and uncertainty about the future survival of small farm operations as viable economic units and as a "way of life" (Ghebremedhin and Johnson, 1985; Heady and Sonka, 1974).

Net farm incomes of Louisiana farmers have been highly unpredictable from year to year due to the continuing financial crisis in agriculture. With farm foreclosures on the increase, a decrease in land values, and a persistent increase in production costs, banks and the rural community are feeling the economic effects of a declining farm economy. Financial problems are not evenly spread among all types of farms. The larger farms currently are carrying the greatest debts relative to assets, but they tend to have greater debt bearing capacity. Most small farm operators showed little indication of serious financial stress. Most of these farmers use off-farm income to supplement family income. The greatest financial stress likely occurs among medium size farmers who do not have the debt bearing capacity and inadequate off-farm income to maintain farming operations (U.S. Department of Agriculture, 1984).

The shifting structure of production agriculture characterized by technological change and economic growth has created problems for farmers, forcing them either to get large, get out of farming, or get off-farm work to survive. The opportunity for farm population to migrate to urban centers for better economic opportunities has facilitated the consolidation of land into larger but fewer farms over the years. Many workers from agriculture who were either farmers or employed on farms have been displaced. Higher urban wages and salaries, more attractive jobs, and better educational opportunities and other public services in contrast to lower relative farm wages, limited employment opportunities, and low return in agriculture

combined to produce a large exodus of the farm population, particularly the working age group from rural agricultural communities to urban centers. However, the future may seem an increase in the rural population, albeit in non-farming occupations. It has been observed that a substantial growth of population in some rural and small towns has taken place mostly as a result of the search for quality of life or the prospects for better economic opportunities in the rural areas (Ghebremedhin, 1982).

Off-farm employment has been an integral part of the emerging structure of production agriculture. The shift toward more off-farm work by farm families has been one of the most dramatic changes which has taken place in production agriculture in Louisiana over the years. In the past, the farm business was an important component and main source of family income. Any income from off-farm sources had been considered of minor importance to the well-being of the farm family. Even though family income has improved to a large extent over the years, lack of adequate income from farming has continued to be a major problem on many small farms because family requirements have increased more rapidly. Judged against conventional desires current farm incomes seem less adequate than ever before. Because of this inadequacy, small farm families in particular, are becoming increasingly dependent on off-farm employment as a means of survival. Consequently, off-farm income has become a growing component of total family income and the basis for

family living. It represents an important alternative income source for small farm families (Ghebremedhin and Golden, 1985).

The relationship between off-farm employment and the farm business is particularly important for small farm families whose off-farm employment supports their households during periods of low or negative net farm income. Off-farm employment is a phenomenon commonly thought to be limited to families who run relatively small farms. Financial pressures and family requirements force many owners of small, medium size and large farms to expand their operations and/or increase their off-farm income. Recently some farm operators of large size units have also depended on off-farm employment as a supplementary source of income. However, families operating small farms usually depend more on off-farm employment than families operating large farms. Off-farm income made up 70 percent of the total family income among the small farm operators (U.S. Census of Agriculture, 1982). These situations include a wide range of circumstances from older and retired families who are living primarily on savings, social security, veterans payments, and other income sources to younger families struggling with very limited agricultural resources. As a result, farming has become a secondary occupation to some other off-farm source of income for the majority of the small farm families (Ghebremedhin and Golden, 1986).

The direction and rate of change in the structure of production agriculture raise public policy questions in light of the issue of small farm survival. The Census of Agriculture

(1982) indicated that the majority of farm families live on small farms and constitute the majority of agricultural enterprises in the country. Accordingly, the survival of small farms implies a greater number of farm families, more viable communities, potential contribution of farm income, and a substantial demand for public and private goods and services that may have been overlooked over the years. As Marshall (1976) indicated, emphasis on low income families is appropriate for public policy which concerns itself with people who are not likely to benefit from market or non-governmental forces. The main objective of this paper is, therefore, to evaluate the relative importance of some social and economic factors that contributed to the explanation of differences in off-farm employment of rural farm families in Louisiana.

MATERIAL AND METHODS

The parishes surrounding the Baton Rouge metropolitan center were selected for survey study. These rural communities are characterized by a high concentration of small farm operations and have agriculture as the principal economic base. There are relatively high concentrations of low income rural farm families whose major source of income is off-farm employment. The survey data on the demographic, farm and economic characteristics of farm families were ascertained by personal interviews through structured questionnaires from a randomly selected sample of farm families in the rural communities of the study area. The various characteristics

include family size, educational status, race, sex, age distributions, farm size, farm ownership, farm income and expense, farm experience, family income, off-farm income, days worked off-farm, mileage travelled to non-farm jobs or business, off-farm work experience, conventional sources and kinds of off-farm jobs most accessible to farm families seeking off-farm employment, the rate of pay received on off-farm jobs, and the barriers encountered in seeking off-farm jobs. Extension agents, employees of the Farmers Home Administration, Vocational Agricultural teachers, the Livestock and Crop Reporting Service, and individual farmers supplied a list of farmers to be considered in the study. Farmers who have some type of off-farm work or business were considered for the study. A total of 142 completed questionnaires were used for statistical analysis. Ordinary least squares (OLS) regression method was applied to evaluate the relationship of some social and economic variables to off-farm income. The basis statistical linear regression function selected was:

$$Y_i = b_0 + \sum_{i=1}^{13} b_i X_i \qquad i = 1, 2, 3, \ldots 13$$

Where:

Y_i = Total family off-farm income which is the combination of off-farm income of the operator and spouse, ($).

X_1 = Age of operator, (years)

X_2 = Age of spouse, (years)

X_3 = Education of operator, (years)

X_4 = Education of spouse, (years)

X_5 = Distance travelled by operator to off-farm job, (miles)

X_6 = Number of hours worked per year by operator, (hours)

X_7 = Experience of operator in off-farm work, (years)

X_8 = Distance travelled by spouse to off-farm work, (miles)

X_9 = Number of hours worked per year by spouse, (hours)

X_{10} = Experience of spouse in off-farm work, (years)

X_{11} = Size of farm operated, (acres)

X_{12} = Total family members in household

X_{13} = Gross farm income, ($)

The statistical association between total off-farm income and the socio-economic variables are hypothesized to be $b_i > 0$.

RESULTS AND DISCUSSIONS

By examining the breakdown of off-farm income for farm families, it is estimated that approximately 68 percent of the total family income received was for off-farm income, of which 42 percent was earned by the farm operators and 26 percent was earned by the spouses. Average off-farm income was $15,138 for the white farmers and $14,133 for the black farmers. Average off-farm income for the white farm operator was $18,852 and $11,205 for the spouse. Average off-farm income for the black farm operator was $16,341 and $11,122 for the spouse. About two-thirds of the farm operators received over $15,000 from off-farm income while over fifty percent of the spouses received less than $15,000 off-farm income. The survey statistics indicated that this differential in off-farm income between the farm operators and spouses might be due to a gap in occupational skill levels and geographic mobility to off-farm jobs.

The farm families and residents of low-income rural areas, though able and willing to work, could not find jobs. Finding a job in rural communities and small towns was perceived by many to be difficult for a variety of reasons. The most serious factors hindering the farm operators and their spouses from securing gainful employment in their communities and surrounding areas were limited job opportunities. The main reason is that the number of non-agricultural jobs in the rural areas has not increased enough to absorb the large number of low-skilled workers displaced by structural changes in agriculture. The second most frequently cited problem was lack of adequate information about off-farm jobs in the areas. Perhaps not knowing the right people and the right place for job information was a serious problem in securing employment. Many rural people believed that personal ties to family members, relatives, friends, or local influentials were instrumental in getting hired. Blacks, females, and poor farm families considered not knowing where to look for a job to be a serious problem. Blacks and less educated low-income families especially appeared to suffer from social isolation which they felt barred them from obtaining decent jobs in their communities. Blacks also thought racial discrimination seriously limited their ability to obtain jobs. Many farm families believed also that lack of marketable skill kept them from finding gainful employment. Even though the federal government has undertaken a variety of employment and training programs since 1960, these programs seem to have

been inadequate or unavailable to many who now seek jobs in low-income rural areas.

The results of the linear regression model are presented in Table 1. Eight of the explanatory variables significantly affect total off-farm income of farm families. The coefficients representing age of operator, education of operator, distance travelled to off-farm work by operator, hours worked off-farm by operator and spouse, and years of experience of spouse in off-farm work were all found to be positive and significant at a probability level of 5 percent. The age and education coefficients for the spouse were negative but significant at a level of 5 percent. Off-farm income was expected to be directly related to the age of the spouse based on the assumption that older spouses have more off-farm work experience, and therefore, will receive higher salaries and wages. The negative sign may be explained by the fact that off-farm work generally available in the area require physical strength, for this reason, the employers can be expected to prefer young female workers rather than experienced older workers with declining strength. The possible interpretation of the negative sign for spouse education may be that an increase in the education increases the productivity of spouse in the household or on the farm more than it increases the productivity in the off-farm employment. The nature of off-farm jobs available in the study area do not require high levels of formal education and therefore, pay relatively lower wages and salaries. The coefficients on gross farm income, size of farm operated, and number of family members

in household were positive as expected but not significant. The coefficients on years of experience of operator in off-farm work and distance travelled to off-farm work and distance travelled to off-farm work by spouse were negative and not significant. The non-significant and negative coefficient for distance travelled by spouse to off-farm work may indicate that there is not much variation in the distance travelled to the job by spouses. The non-significant and negative coefficient for experience of operator in off-farm work indicates that years of experience in off-farm work for the available types of off-farm jobs in the study area may not be essential.

The coefficient of multiple determination (R^2) had significant value which meant that the estimated regression equation explained about 70 percent of the variation in the total off-farm income. The high value of F-statistics indicated that the regression model is statistically significant at the one percent level. In the table, elasticities were also computed for each of the independent variables at their mean values to determine the responsiveness of total off-farm income to changes in the socioeconomic factors. Most of the variables in the model were not elastic with respect to off-farm farm earnings.

Table 1: Regression Coefficients and Related Statistics of Factors Affecting Total Off-Farm Income of Selected Louisiana Farm Families

Independent Variable	Mean	Parameter Estimate	t-Ratio	PR > |T|	Elasticity at Mean
Constant	-	-43062.925	-1.91	0.0667**	-
X_1	45.38	1397.025	2.63	0.0142*	1.973
X_2	41.48	-1305.395	-2.57	0.0164**	-1.685
X_3	3.80	7694.637	4.14	0.0003*	0.303
X_4	3.75	-2598.333	-1.74	0.0960***	-0.303
X_5	18.84	170.946	2.39	0.0245**	0.100
X_6	1916.80	10.324	2.42	0.0227**	0.616
X_7	16.03	-118.525	-1.02	0.3159	-0.094
X_8	10.33	-104.650	-0.61	0.5463	-0.034
X_9	1644.80	8.212	2.16	0.00399**	0.420
X_{10}	11.75	654.153	2.62	0.0146**	0.239
X_{11}	144.25	1.143	0.15	0.8824	0.239
X_{12}	4.10	327.277	0.29	0.7740	0.042
X_{13}	14974.00	0.109	0.72	0.4768	0.051

$R^2 = 0.698$ F = 4.63 PR > F = 0.0004

Mean of Total Off-Farm Income = 32142.35

* Represents significance at the 1% level for one-tailed test.
** Represents significance at the 5% level for one-tailed test.
*** Represents significance at the 10% level for one-tailed test.

SUMMARY AND CONCLUSION

The shifting structure of production agriculture has resulted in more off-farm employment among farm families and it is doubtful that greater reliance on off-farm income is a temporary phenomenon. While farming remains to many as a "way of life", it frequently is no longer the only means of economic livelihood to the farm families. In fact, farming became a secondary occupation to some other employment and source of income for the majority of the farm families. On the average, in all small farm groupings, off-farm employment contributes more net cash income than does farming to total family income. In general, off-farm income tends to be more stable and less variable from year to year than farm income, it creates a more even flow of income over time. For many small farms, off-farm income acts as a "safety net" ensuring family survivability in the farm and rural communities. As a result, most small farm families seek jobs away from their farms for at least a short time to earn supplementary family income. The farm families increasingly combine farm work with full- or part-time off-farm employment. Some small farm families hold full-time jobs in the cities and do their farming at night and weekends and in many cases two or more household members are required to work off the farm in order to escape poverty and to continue living in the community of their choice. However, most off-farm jobs held by the respondents in the rural areas and small towns were low-skilled and low-paying. The off-farm jobs were in secondary labor market and pay low wages commensurate

with their basic educational skills and worked experience. With Louisiana now posting the highest unemployment rates in the country, opportunities for future off-farm employment are reduced. It will probably be more difficult and critical for small farm families in general and minority farm families in particular, to maintain economic viability and survivability.

There is a need for a rural development program that would integrate both the farm and non-farm programs to be initiated at state, parish and local levels. The overall package development program must include a broad range of public service programs ranging from off-farm job creation and human resource development to welfare, social security and community development programs. In general, the development program and assistance made to small farms may be less expensive than welfare payments and cost of social problems created by their migration to urban centers. Thus, policies and development programs should be developed to solve the problems of rural poverty and unemployment. The programs and policies to help small farmers can not be separated from programs and policies designed to develop rural areas.

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